

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/530,643  
Source: PCT  
Date Processed by STIC: 7/3/06

# ***ENTERED***



PCT

## RAW SEQUENCE LISTING

DATE: 07/03/2006

PATENT APPLICATION: US/10/530,643

TIME: 12:00:05

Input Set : E:\56446-20041.00 - Seqlist.txt

Output Set: N:\CRF4\07032006\J530643.raw

4 <110> APPLICANT: CAYOUE, Michelle  
5 HANSEN, Connie Jo  
6 MCCLURE, Amy  
7 SUN, May  
8 GRAMATIKOVA, Svetlana  
9 DYCAICO, Mark  
10 BARTON, Nelson R.  
11 STEGE, Justin T.  
12 ABOUSHADI, Nahla M.

14 <120> TITLE OF INVENTION: PROTEASES, NUCLEIC ACIDS ENCODING THEM  
15 AND METHODS FOR MAKING AND USING THEM

18 <130> FILE REFERENCE: 564462004100

20 <140> CURRENT APPLICATION NUMBER: US 10/530,643

C--> 21 <141> CURRENT FILING DATE: 2006-04-07

23 <150> PRIOR APPLICATION NUMBER: PCT/US03/32819

24 <151> PRIOR FILING DATE: 2003-10-10

26 <150> PRIOR APPLICATION NUMBER: 60/471,423

27 <151> PRIOR FILING DATE: 2003-05-16

29 <150> PRIOR APPLICATION NUMBER: 60/418,467

30 <151> PRIOR FILING DATE: 2002-10-10

32 <160> NUMBER OF SEQ ID NOS: 255

34 <170> SOFTWARE: FastSEQ for Windows Version 4.0

36 <210> SEQ ID NO: 1

37 <211> LENGTH: 1305

38 <212> TYPE: DNA

39 <213> ORGANISM: Bacteria

41 <400> SEQUENCE: 1

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43	accctgctag	cgctactgat	cctgccgagt	ctcgccccgg	tgccgaccgc	tgtatcctac	120
44	aagacgctca	tagtgaagat	tgaccgtgcg	aagttcgacc	cggagagggg	gaagggccta	180
45	ggcggtcg	tggtgtacgt	cgcccagctt	gccccgggtg	ccatcctggt	ggtgccggct	240
46	cacgctgcg	agcatgtcaa	gaagctgccg	ggcgctcttc	acgtatccga	ggatggcgag	300
47	gtaaaaggc	gtgcagttag	agtctcgcta	accagccgc	cgcagacaat	gccgtggggc	360
48	gtggactaca	ttgacgctga	gcaggtgtgg	tcgataacga	agggcttcgt	agacgtcaac	420
49	ggcgatggt	attccgagat	cgaggttgcc	gtgatagact	ctggtgttga	cctagaccac	480
50	ccagacctcg	ccgataacat	caagtgggtc	gtagcgggtc	tcaacggcag	gataagcaac	540
51	agatgctccg	atgtgaacgg	ccatgggtacg	cacgtgaccg	gcacgatagc	cgcgcttgac	600
52	aacgagatag	gcgttgtcgg	cgctcgcgcca	gaggtcgaga	tctacatgat	caaggccctc	660
53	aagaactctg	ggagtggctc	ctggagcgac	ctcataatag	ccattgacct	cgccgtgaga	720
54	ggcccagacg	gcgtgataga	cgctgacggc	gacgggtgtga	ttgtcgggtg	ccctgaggac	780
55	gacgcgccag	aagtcataag	catgagcctc	ggtggttacg	atccaccacc	agagctccag	840
56	gaggtcatag	cggcagccta	cagctacggg	atcgtgatcg	tcgcggcggc	gggcaacgag	900
57	ggtctagaca	cgccagccta	cccagcagca	taccccgagg	tcatagcggg	gggcgccatc	960

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58 gatgagaacg ccacgggtgcc agactggagc aaccgcaacc cagaggtaac agccccaggc 1020
59 gtcgacatac tcagcacata ccccgacgac agctacgcgg tgctaagcgg cactagcatg 1080
60 gccacccac acgtgagcgg cacagtcgg ctaatccagg cagccaggct cgcccagggc 1140
61 ctaccactac taccaccagg cacagaggac gacctaacca cagacaccgt gagaggcatc 1200
62 ctacacctaa cagcggtcga cctcggagac cccggctacg acacgctata cggtacggc 1260
63 gtgatcaacg cctacgatgc ggtgttaacc gcactaaaca gctag 1305
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66 <211> LENGTH: 434
67 <212> TYPE: PRT
68 <213> ORGANISM: Bacteria
70 <220> FEATURE:
71 <221> NAME/KEY: SIGNAL
72 <222> LOCATION: (1)...(37)
74 <400> SEQUENCE: 2
75 Met Cys Trp Trp Ala Arg Gly Gly Val Met Gly Arg Leu Val Ala Asn
76 1 5 10 15
77 Leu Leu Ala Leu Thr Leu Leu Ala Leu Leu Ile Leu Pro Ser Leu Ala
78 20 25 30
79 Pro Val Ala Thr Ala Val Ser Tyr Lys Thr Leu Ile Val Lys Ile Asp
80 35 40 45
81 Arg Ala Lys Phe Asp Pro Glu Arg Val Lys Gly Leu Gly Gly Arg Val
82 50 55 60
83 Val Tyr Val Ala Gln Leu Ala Pro Val Ala Ile Leu Val Val Pro Ala
84 65 70 75 80
85 His Ala Ala Glu His Val Lys Lys Leu Pro Gly Val Leu His Val Ser
86 85 90 95
87 Glu Asp Gly Glu Val Lys Ala Phe Ala Val Arg Val Ser Leu Thr Gln
88 100 105 110
89 Pro Pro Gln Thr Met Pro Trp Gly Val Asp Tyr Ile Asp Ala Glu Gln
90 115 120 125
91 Val Trp Ser Ile Thr Lys Gly Phe Val Asp Val Asn Gly Asp Gly Asp
92 130 135 140
93 Ser Glu Ile Glu Val Ala Val Ile Asp Ser Gly Val Asp Leu Asp His
94 145 150 155 160
95 Pro Asp Leu Ala Asp Asn Ile Lys Trp Cys Val Ala Val Leu Asn Gly
96 165 170 175
97 Arg Ile Ser Asn Arg Cys Ser Asp Val Asn Gly His Gly Thr His Val
98 180 185 190
99 Thr Gly Thr Ile Ala Ala Leu Asp Asn Glu Ile Gly Val Val Gly Val
100 195 200 205
101 Ala Pro Glu Val Glu Ile Tyr Met Ile Lys Ala Leu Lys Asn Ser Gly
102 210 215 220
103 Ser Gly Ser Trp Ser Asp Leu Ile Ile Ala Ile Asp Leu Ala Val Arg
104 225 230 235 240
105 Gly Pro Asp Gly Val Ile Asp Ala Asp Gly Asp Gly Val Ile Val Gly
106 245 250 255
107 Asp Pro Glu Asp Asp Ala Pro Glu Val Ile Ser Met Ser Leu Gly Gly
108 260 265 270
109 Tyr Asp Pro Pro Pro Glu Leu Gln Glu Val Ile Ala Ala Ala Tyr Ser

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110          275          280          285
111 Tyr Gly Ile Val Ile Val Ala Ala Ala Gly Asn Glu Gly Leu Asp Thr
112          290          295          300
113 Pro Ala Tyr Pro Ala Ala Tyr Pro Glu Val Ile Ala Val Gly Ala Ile
114 305          310          315          320
115 Asp Glu Asn Ala Thr Val Pro Asp Trp Ser Asn Arg Asn Pro Glu Val
116          325          330          335
117 Thr Ala Pro Gly Val Asp Ile Leu Ser Thr Tyr Pro Asp Asp Ser Tyr
118          340          345          350
119 Ala Val Leu Ser Gly Thr Ser Met Ala Thr Pro His Val Ser Gly Thr
120          355          360          365
121 Val Ala Leu Ile Gln Ala Ala Arg Leu Ala Gln Gly Leu Pro Leu Leu
122          370          375          380
123 Pro Pro Gly Thr Glu Asp Asp Leu Thr Thr Asp Thr Val Arg Gly Ile
124 385          390          395          400
125 Leu His Leu Thr Ala Val Asp Leu Gly Asp Pro Gly Tyr Asp Thr Leu
126          405          410          415
127 Tyr Gly Tyr Gly Val Ile Asn Ala Tyr Asp Ala Val Leu Thr Ala Leu
128          420          425          430
129 Asn Ser

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132 &lt;210&gt; SEQ ID NO: 3

133 &lt;211&gt; LENGTH: 1572

134 &lt;212&gt; TYPE: DNA

135 &lt;213&gt; ORGANISM: Bacteria

137 &lt;400&gt; SEQUENCE: 3

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138 atgtcagtga tgcgtggatc acggcgccga accgccaccg ccgcgggccgt cgccgtcgcc      60
139 gccctcacc ctcggctccct ctccaccctc ccggccgccc ccgcaccggc cgccccggaa      120
140 ggcgtcatcg ggaacgccgg agccgaaggc acgatcgccg gcagctacat cgtcaccctc      180
141 gacgagtcgg cgcaggcgga gaccgccaag ggccggggcc tagcggccaa gtccggcgcg      240
142 aagatcaagc ggacctacac ctccggccgt aacggctacg ccgtcgaaact ctccgagggc      300
143 caggcgaaga agctcgccgg cgaccccgcc gtgacctccg tcgtccagaa ccgcgtcttc      360
144 cacgtcgacg gcaacgcagg ctccccgccc tcctgggggtc tggaccggat cgaccagaag      420
145 gcccttcggc tgaaccagag ctacacctac ccgacaccg cgggccaggg cgtgacggcg      480
146 tacatcatcg acaccggcgt acgcatcacc cacagcgact tcggcgcccg cgcctcctac      540
147 ggctacgacg ccacgcgaaa cgacaacacc gccacggcag gccacggcca cggcaccacc      600
148 gtcgcccggc cggtcgcggg cacctcgtag ggctcgcca agaaggcgaa gatcgtcggc      660
149 gtccgcgtcc tcgacaactc cggctccggc acgaccgagc aggtcgtcgc gggcatcgac      720
150 tgggtcacgc ggaacgccgt gaagccggcc gtcgccaaca tgagcctcgg cgggtggcgtc      780
151 gacaccgtcc tcgacgcagc cgtccgcaac tcgatcgct ccggcgtcac gtacgcggtc      840
152 gcggccggca acgacagctc caacgcctcc aactactcgc cggcgcgcg caccgagggc      900
153 atcaccgtcg gtcaccagac caacaccgac gcccgctcca gcttctccaa ctacggcacg      960
154 gtcttggaac tcttcgcccc gggctcctcc atcacctcgt cctggaacac cagcgactcc     1020
155 gccaccaaca ccatctccgg tacgtcgatg gcgaccccg acgtcgcggg cgcccgggcc     1080
156 gtctacctcg ccggcaaccc gacggccacc ccggcgcgag tctccacggc cctcaccacc     1140
157 gccgccaccc cgaacgtcgt caccaccccg ggctccgggt ccccggaacc gctgctctac     1200
158 gtcggcgggc gcaccaccac ccgcgccggc ccgaagtctg agaacaccgc cgactacgcc     1260
159 atcgccgaca acgcgaccgt cgagtccccg gtcaccgtca gcggcgtcag cggcaacgcc     1320
160 cccgccgccc tcagggtccc ggtgaacatc gtccacacct acatcggtga cctccagatc     1380
161 cagctgatcg ccccgacggc ctcggcgtac acgtgaagg ccttcggcac cggcggcagc     1440

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162 tcggacaaca tcaacaccac gtacagcgtg aacgcctcct cggaggctcg caacggcacg      1500
163 tggaagctcc gcgtcacgga caacgcgaac gccgacaccg gcaagatcga ctctggggcc      1560
164 ctgcagttct ga                                          1572
166 <210> SEQ ID NO: 4
167 <211> LENGTH: 523
168 <212> TYPE: PRT
169 <213> ORGANISM: Bacteria
171 <220> FEATURE:
172 <221> NAME/KEY: SIGNAL
173 <222> LOCATION: (1)...(36)
175 <400> SEQUENCE: 4
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177 1 5 10 15
178 Val Ala Val Ala Ala Leu Thr Leu Gly Ser Leu Ser Thr Leu Pro Ala
179 20 25 30
180 Ala Ala Ala Pro Ala Ala Pro Glu Gly Val Ile Gly Asn Ala Gly Ala
181 35 40 45
182 Glu Gly Thr Ile Ala Gly Ser Tyr Ile Val Thr Leu Asp Glu Ser Ala
183 50 55 60
184 Gln Ala Glu Thr Ala Lys Gly Arg Ala Val Ala Ala Lys Phe Gly Ala
185 65 70 75 80
186 Lys Ile Lys Arg Thr Tyr Thr Ser Ala Val Asn Gly Tyr Ala Val Glu
187 85 90 95
188 Leu Ser Glu Ala Gln Ala Lys Lys Leu Ala Ala Asp Pro Ala Val Thr
189 100 105 110
190 Ser Val Val Gln Asn Arg Val Phe His Val Asp Gly Thr Gln Pro Ser
191 115 120 125
192 Pro Pro Ser Trp Gly Leu Asp Arg Ile Asp Gln Lys Ala Leu Pro Leu
193 130 135 140
194 Asn Gln Ser Tyr Thr Tyr Pro Asp Thr Ala Gly Gln Gly Val Thr Ala
195 145 150 155 160
196 Tyr Ile Ile Asp Thr Gly Val Arg Ile Thr His Ser Asp Phe Gly Gly
197 165 170 175
198 Arg Ala Ser Tyr Gly Tyr Asp Ala Ile Asp Asn Asp Asn Thr Ala Gln
199 180 185 190
200 Asp Gly His Gly His Gly Thr His Val Ala Gly Thr Val Ala Gly Thr
201 195 200 205
202 Ser Tyr Gly Val Ala Lys Lys Ala Lys Ile Val Gly Val Arg Val Leu
203 210 215 220
204 Asp Asn Ser Gly Ser Gly Thr Thr Glu Gln Val Val Ala Gly Ile Asp
205 225 230 235 240
206 Trp Val Thr Arg Asn Ala Val Lys Pro Ala Val Ala Asn Met Ser Leu
207 245 250 255
208 Gly Gly Gly Val Asp Thr Val Leu Asp Ala Ala Val Arg Asn Ser Ile
209 260 265 270
210 Ala Ser Gly Val Thr Tyr Ala Val Ala Ala Gly Asn Asp Ser Ser Asn
211 275 280 285
212 Ala Ser Asn Tyr Ser Pro Ala Arg Val Thr Glu Ala Ile Thr Val Gly
213 290 295 300

```

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214 Ser Thr Thr Asn Thr Asp Ala Arg Ser Ser Phe Ser Asn Tyr Gly Thr  
 215 305 310 315 320  
 216 Val Leu Asp Ile Phe Ala Pro Gly Ser Ser Ile Thr Ser Ser Trp Asn  
 217 325 330 335  
 218 Thr Ser Asp Ser Ala Thr Asn Thr Ile Ser Gly Thr Ser Met Ala Thr  
 219 340 345 350  
 220 Pro His Val Ala Gly Ala Ala Val Tyr Leu Ala Gly Asn Pro Thr  
 221 355 360 365  
 222 Ala Thr Pro Ala Gln Val Ser Thr Ala Leu Thr Thr Ala Ala Thr Pro  
 223 370 375 380  
 224 Asn Val Val Thr Asn Pro Gly Ser Gly Ser Pro Asn Arg Leu Leu Tyr  
 225 385 390 395 400  
 226 Val Gly Gly Gly Thr Thr Thr Pro Pro Gly Pro Lys Phe Glu Asn Thr  
 227 405 410 415  
 228 Ala Asp Tyr Ala Ile Ala Asp Asn Ala Thr Val Glu Ser Pro Val Thr  
 229 420 425 430  
 230 Val Ser Gly Val Ser Gly Asn Ala Pro Ala Ala Leu Gln Val Pro Val  
 231 435 440 445  
 232 Asn Ile Val His Thr Tyr Ile Gly Asp Leu Gln Ile Gln Leu Ile Ala  
 233 450 455 460  
 234 Pro Asp Gly Ser Ala Tyr Thr Leu Lys Ala Phe Gly Thr Gly Gly Ser  
 235 465 470 475 480  
 236 Ser Asp Asn Ile Asn Thr Thr Tyr Ser Val Asn Ala Ser Ser Glu Val  
 237 485 490 495  
 238 Ala Asn Gly Thr Trp Lys Leu Arg Val Thr Asp Asn Ala Asn Ala Asp  
 239 500 505 510  
 240 Thr Gly Lys Ile Asp Ser Trp Ala Leu Gln Phe  
 241 515 520

243 &lt;210&gt; SEQ ID NO: 5

244 &lt;211&gt; LENGTH: 3684

245 &lt;212&gt; TYPE: DNA

246 &lt;213&gt; ORGANISM: Bacteria

248 &lt;400&gt; SEQUENCE: 5

249 atgacgtcga ggaccacacc cttcgacagg gggagagccg cgctgatcgc cgcgggcgctc 60  
 250 tccctcgtga tgctctcgac agggcagacc gccgcgcgcg ggaccaccac atccgccgta 120  
 251 ccggacacct tcaaggcgac ggcgagcacc accgtcaccg tcgtcaccgg cgaccgcgctc 180  
 252 accctcacgg acctcggcgg cggccggaag accgtcaccg tcgaccgggc cgagggcgcc 240  
 253 accggcgcga tacgcagccg gatcgacgac ggccgggtca ccgtcgtccc cgacgaggcc 300  
 254 cgccctacc tggactccgg cgcgctcgac ccgcggctct tcgacgtcac cggcctagtc 360  
 255 gaacagggcg tcaccggcga gctcccgtc atcgtcacc acggcggaac gaccgccagg 420  
 256 accgcgcgcg cggcccccgc cggcgccgag accgtcgcgc cgctgcccag catcggcggg 480  
 257 gccgcgctca ccgccaccga cccgcctcc ttctggcgcg gtttcaccgc cgcgccgacc 540  
 258 gcccgggcgc ccgccccgc caaggtctgg ctgcaggggc ggggtaaggc cgcgatggcc 600  
 259 gagtccaacg cccagatcgg caccgccgaag gcctgggagg cgggggtcac cggcaagggc 660  
 260 gtgaaggctg cggctctcga caccggcgcc gacctcgccc accccgacct cgcgggccgg 720  
 261 gtcaccgagt ccaagtcgtt catcgccggc caggaggctg ccgaccgcaa cggccacggc 780  
 262 acccacgtcg cctccaccgt cggcggcagc ggtgcccgt ccgacggcaa ggagaagggc 840  
 263 gtcgccccgc gcgccaccct cgccgtgggc aaggtcctca gcgacgaggg cagcggctcc 900  
 264 gagtccgaga tcacgcgcgg catggagtgg gccgccaagg acatcgacgc gaagatcgtc 960

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TIME: 12:00:06

Input Set : E:\56446-20041.00 - Seqlist.txt

Output Set: N:\CRF4\07032006\J530643.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

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Seq#:201; N Pos. 2746,2747,2748,2749,2750,2751,2752,2753,2754,2755,2756  
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Input Set : E:\56446-20041.00 - Seqlist.txt

Output Set: N:\CRF4\07032006\J530643.raw

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Seq#:220; N Pos. 3211,3212,3213,3214,3215,3216,3217,3218,3219,3220,3221

Seq#:220; N Pos. 3222,3223,3224,3225,3226,3227,3228,3229,3230

Seq#:236; N Pos. 3120,3121,3122,3123,3124,3125,3126,3127,3128,3129,3130

Seq#:236; N Pos. 3131,3132,3133,3134,3135,3136,3137,3138,3139



## VERIFICATION SUMMARY

DATE: 07/03/2006

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Input Set : E:\56446-20041.00 - Seqlist.txt

Output Set: N:\CRF4\07032006\J530643.raw

L:21 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:1098 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:1101 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:20  
L:1232 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:1235 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:22  
L:1319 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:1322 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:24  
L:1543 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:1546 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:28  
L:1672 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:1675 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:30  
L:1792 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:1795 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:32  
L:2007 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:2010 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:36  
L:2168 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:2171 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:38  
L:2465 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:2468 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:42  
L:2574 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:2577 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:44  
L:2709 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:2712 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:46  
L:2836 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:2839 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:48  
L:2949 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:2952 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:50  
L:3086 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:3089 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:52  
L:3272 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:3275 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:54  
L:3437 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:3440 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:56  
L:3568 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:3571 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:58  
L:3767 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:3770 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:62  
L:4144 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:4147 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:68  
L:4274 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:4277 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:70  
L:4398 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:4401 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:72  
L:4520 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:4523 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:74  
L:4659 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:4662 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:76  
L:5056 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!

## VERIFICATION SUMMARY

DATE: 07/03/2006

PATENT APPLICATION: US/10/530,643

TIME: 12:00:06

Input Set : E:\56446-20041.00 - Seqlist.txt

Output Set: N:\CRF4\07032006\J530643.raw

L:5059 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:82  
L:5198 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:5201 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:84  
L:5386 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:5389 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:86  
L:5532 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:5535 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:88  
L:5663 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:5666 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:90  
L:5883 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:5886 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:94  
L:5979 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:5982 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:96  
L:6294 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:6297 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:102  
L:6788 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:6791 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:112  
L:6960 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:6963 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:114  
L:7227 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:7230 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:116  
L:7596 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:7599 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:122  
L:7713 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:7716 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:124  
L:7920 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:7923 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:128  
L:8104 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:8107 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:132  
L:8181 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:8184 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:134  
L:8532 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:8535 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:140  
L:8645 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:8648 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:142  
L:8785 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:8788 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:144  
L:9569 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:152  
L:9573 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:152  
L:9577 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:152  
L:9581 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:152  
L:10123 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:160  
L:10127 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:160  
L:10131 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:160  
L:10230 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:160 after pos.:2043  
L:10464 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:165  
L:10528 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:166  
L:10532 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:166  
L:10536 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:166

## VERIFICATION SUMMARY

DATE: 07/03/2006

PATENT APPLICATION: US/10/530,643

TIME: 12:00:06

Input Set : E:\56446-20041.00 - Seqlist.txt

Output Set: N:\CRF4\07032006\J530643.raw

L:11016 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:173  
L:11020 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:173  
L:11024 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:173  
L:11028 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:173  
L:11118 M:361 W: Invalid Split Codon, Sequence data for SEQ ID#: 173  
L:11412 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:180  
L:11484 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:181  
L:11488 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:181  
L:11492 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:181  
L:11496 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:181  
L:11887 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:188  
L:11959 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:189  
L:11963 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:189  
L:12381 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:194  
L:12385 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:194  
L:12465 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:195  
L:12469 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:195  
L:12873 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:200  
L:12949 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:201  
L:12953 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:201  
L:13095 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:201 after pos.:2720  
L:13096 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:201 after pos.:2780  
L:13097 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:201 after pos.:2840  
L:13098 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:201 after pos.:2900  
L:13099 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:201 after pos.:2960  
L:13384 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:206  
L:13388 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:206  
L:13392 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:206  
L:13560 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:206 after pos.:3309  
L:13561 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:206 after pos.:3369  
L:13562 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:206 after pos.:3429  
L:13563 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:206 after pos.:3489  
L:13564 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:206 after pos.:3549  
L:13824 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:211  
L:13908 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:212  
L:13912 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:212  
L:13916 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:212  
L:13920 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:212  
L:14374 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:220  
L:14537 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:220 after pos.:3204  
L:14773 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:223  
L:14777 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:223  
L:14859 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:224  
L:14863 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:224  
L:14867 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:224  
L:14933 M:361 W: Invalid Split Codon, Sequence data for SEQ ID#: 224  
L:15233 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:230  
L:15237 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:230  
L:15305 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:231

**VERIFICATION SUMMARY**

DATE: 07/03/2006

PATENT APPLICATION: US/10/530,643

TIME: 12:00:06

Input Set : E:\56446-20041.00 - Seqlist.txt

Output Set: N:\CRF4\07032006\J530643.raw

L:15925 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:236  
L:15929 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:236  
L:15933 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:236  
L:15937 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:236  
L:16085 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:236 after pos.:3087  
L:16308 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:242  
L:16378 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:243  
L:16382 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:243  
L:16386 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:243  
L:16911 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:250  
L:16915 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:250  
L:17389 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:255